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SACRAMENTO COUNTY OFFICIAL COURT REPORTERS
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1 MONDAY, JANUARY 21, 2003
2 MORNING SESSION

3 The matter of LAURENCE LUCIER and LAURIE LUCIER,
4 Plaintiffs, versus PHILIP MORRIS INCORPORATED and
5 R.J. REYNOLDS TOBACCO COMPANY, Defendants, Case No. 02AS01909,
6 came on regularly this day before the Honorable Steven H.
7 Rodda, Judge of the Superior Court of the State of California,
8 for the County of Sacramento, Department One.

9 The Plaintiffs, LAURENCE LUCIER and LAURIE LUCIER, were
10 represented by: GARY M. PAUL, Attorney at Law; ROBERT M.
11 BROWN, Attorney at Law (not present); and MARY ALEXANDER,
12 Attorney at Law.

13 The Defendant, PHILIP MORRIS INCORPORATED, was
14 represented by: GERALD V. BARRON, Attorney at Law; LAURA C.
15 FEY, Attorney at Law (not present); DEBORAH A. SMITH, Attorney
16 at Law; and ANNIE Y.S. CHUANG, Attorney at Law (not present).

17 The Defendant, R.J. REYNOLDS TOBACCO COMPANY, was
18 represented by: THEODORE M. GROSSMAN, Attorney at Law; STEVEN
19 N. GEISE, Attorney at Law; HAROLD K. GORDON, Attorney at Law;
20 DANIEL J. McLOON, Attorney at Law (not present); and ELIZABETH
21 P. KESSLER, Attorney at Law.

22 (The following proceedings were then had in open court
23 outside the presence of the jury.)

24 ---oOo---

25 THE COURT ATTENDANT: Please come to order.

26 THE COURT: Good morning.

27 COUNSEL IN UNISON: Good morning, your Honor.

28 THE COURT: I won't be advising you about the ruling on
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1 the nonsuit motion until tomorrow, so we're just going to
2 proceed.

3 Jurors are all here?

4 THE COURT ATTENDANT: Yes, your Honor.

5 THE COURT: Let's bring them in.

6 (The following proceedings were then had in open court in

7 the presence of the jury.)
8 THE COURT: Good morning.
9 Okay. Ready to go, are we? Mr. Barron?
10 MR. BARRON: Yes. Thank you, your Honor.
11 Defendant Philip Morris would like to call as a witness
12 Jerry Whidby.
13 THE CLERK: Please take the witness stand.
14 Raise your right hand.
15 Do you solemnly swear the testimony that you shall give
16 will be the truth, the whole truth and nothing but the truth,
17 so help you God?
18 THE WITNESS: Yes, I do.
19 THE CLERK: Please be seated.
20 Please state your name and spell it for the record.
21 THE WITNESS: My name is Jerry Frank Whidby.
22 J-E-R-R-Y. F-R-A-N-K. W-H-I-D-B-Y.
23 THE CLERK: Thank you.
24 THE COURT: Okay.

25 TESTIMONY OF
26 JERRY FRANK WHIDBY, Ph.D., a witness called on behalf of the
27 Defendant Philip Morris Incorporated:
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1 DIRECT EXAMINATION
2 BY GERALD V. BARRON, Attorney at Law, Counsel on behalf of the
3 Defendant Philip Morris Incorporated:
4 Q Good morning, Dr. Whidby.
5 MR. BARRON: And good morning to everyone. I hope you
6 had a nice Martin Luther King holiday. And you made it here in
7 the rain.
8 Q (By MR. BARRON) Were you employed full time by Philip
9 Morris? Were you at one time full time by Philip Morris?
10 A Yes, I was.
11 Q And when was that?
12 A From 1972 to 1998.
13 Q And that would be 26 years approximately?
14 A Yes, sir.
15 Q Did you work in the field of research and development
16 during those entire 26 years?
17 A Yes, I did.
18 Q Are you a chemist?
19 A Yes, I am.
20 Q Do you have a Ph.D. degree in chemistry?
21 A Yes, I do.
22 Q Doctor, when you left your full-time employment with
23 Philip Morris in -- 1998 you said?
24 A Yes, sir.
25 Q And when was that more specifically? What part of the
26 year was it?
27 A It was in the summertime. I think it might have been
28 July. I believe it was July.

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1 Q When you left Philip Morris in the summer of 1998, say
2 July, what were the circumstances? Did you leave voluntarily?
3 Were you fired? What were you going to do?
4 A There was an early retirement offer, and I retired and
5 accepted a early retirement offer from Philip Morris.
6 Q Did you agree at that time to do anything further with
7 Philip Morris in any kind of a relationship other than as a

8 full-time employee?
9 A Yes. I became a consultant to Philip Morris.
10 Q And what was your understanding concerning the kinds of
11 things that you were going to consult about?
12 A There were generally two areas. I continued to consult
13 in the technical areas that I worked on while I was employed
14 full time. In addition to that, I consulted in areas of
15 litigation.
16 Q And when you say in areas of litigation, can you be a
17 little more specific, give us an example of what kind of things
18 you were doing?
19 A I'm sitting here today doing that.
20 Q And so what you mean is, among other things, testifying
21 under oath about things that you know about from your work at
22 Philip Morris in research and development over the 26 years?
23 A Yes, sir.
24 Q And you've done that before in other courtroom settings?
25 A Yes, I have.
26 Q And you have also at the request of plaintiffs' counsel,
27 various plaintiffs' counsel, given depositions to let them know
28 what you think you know about that time period?

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1 A That is correct.
2 Q And you've done that even for Mr. Paul; you gave a
3 deposition and told him what you thought you knew in answering
4 his questions?
5 A Yes, sir.
6 Q You mentioned that you were a chemist. We've had a lot
7 of people testify with a lot of different backgrounds and they
8 mentioned a lot of different fields. One of the fields that
9 was talked about was toxicology. Can you explain in a very
10 shorthand way what the difference is, if there is one, between
11 toxicology and chemistry.
12 A There is a difference. I'm a chemist. I'm an analytical
13 chemist, and my specialty is to try to find out what a compound
14 is in a mixture perhaps, to measure the amount of that, what it
15 is, whereas a toxicologist would look at a chemical perhaps and
16 try to determine whether or not that was toxic; therefore,
17 toxicologist.
18 Q And by toxic meaning, in essence, do some damage because
19 of its chemical make up?
20 A To be a poison or something like that, right.
21 Q We've also heard about another discipline of learning
22 called biochemistry. Can you quickly explain the difference
23 between someone who spends all of his or her time in
24 biochemistry versus someone who spends more time in chemistry.
25 A Just a chemist.
26 A biochemist in general would be interested in compounds
27 or chemicals that relate to biological systems.

28 Q Chemicals that might be found in biological systems or
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1 might affect biological systems --
2 A Correct.
3 Q -- or both?
4 A Correct.
5 Q To what extent, if at all, while you were employed by
6 Philip Morris did you get involved with any efforts of trying
7 to find a way to design or make a safer cigarette?
8 A My entire 26 years at Philip Morris continuing through

9 'til today, I've been involved with trying to determine ways to
10 make safer cigarettes.

11 Q So you mean even in the consulting work that you've done,
12 part of that consulting work, besides testifying about what you
13 knew, has been involved still with that effort?

14 A Yes, sir.

15 Q Has that effort over the years been in any way a
16 collaborative one where people from various disciplines worked
17 together on the same issue of trying to make a safer cigarette?

18 A The whole -- the whole area, the whole time has been in
19 collaboration with other technical folks who have various
20 disciplines to bring to bear on the issue.

21 Q Besides those that we just mentioned, for example, the
22 toxicology and the biochemistry, can you give some other
23 examples of the kinds of disciplines that were used at Philip
24 Morris in trying to figure out a way to make a safer cigarette.

25 A Well, it ranged from physicist, mathematicians,
26 statisticians, agronomists, biologists, a wide array of
27 disciplines, more than I've mentioned, but those are the ones
28 that sort of come to mind.

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1 Q Over the 26 years that you worked there, did you have
2 occasion to be exposed to some of the principles and some of
3 the findings from these other disciplines that were being used?

4 A Yes.

5 Q And over the 26 years, did you develop not necessarily
6 the highly specialized understanding that these people have but
7 some general understanding of some of those principles and how
8 they apply to making a safer cigarette?

9 A In general, yes, but not specifically.

10 Q Can you give me an example of how you'd come across that
11 occasion to be exposed to and try to get some understanding of
12 these other disciplines.

13 A In setting up experiments to evaluate, say, a cigarette
14 design various other disciplines would be involved with that
15 experimental design, if you will. And then their evaluation of
16 the data, I'd be given presentations or be involved with the
17 presentations. So I was just working with the people.

18 Q Now, we've heard from other witnesses, and there was some
19 testimony that Philip Morris at some point established and then
20 maintained a -- what they called a department -- a department
21 of research and development. Is that true? Did that happen?

22 A Yes.

23 Q Was that the department that you worked in?

24 A Yes.

25 Q Let me show you, if I can, Philip Morris Exhibit Number
26 CS-001076.

27 MR. BARRON: Do you need one, Mr. Paul? Let me check
28 real quick.

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1 May I approach the witness, your Honor?

2 THE COURT: Yes.

3 Q (By MR. BARRON) Let me ask -- I'm going to bring you
4 another one that I'm going to ask you about in just a second to
5 speed this up. The first one here is 176. Oops. I think
6 that's right. Oops. There's 176. And I think this is what
7 I'm going to ask you about next, 177. Okay?

8 A Okay.

9 Q Does the first one, one seventy -- excuse me. 1076. I

10 misspoke.
11 Is 1076 -- well, why don't you just tell me what it
12 shows.
13 (Defendant Philip Morris' Exhibit CS-001076 was marked
14 for identification.)
15 THE WITNESS: It's an organizational chart that shows
16 the organization as it existed -- the date here is 1991 --
17 April of '91, I guess.
18 Q (By MR. BARRON) And does your name appear there?
19 A Yes, it does.
20 Q And are you listed as a director of one of the
21 directorates?
22 A Yes, I am.
23 MR. BARRON: I would move this into evidence, your
24 Honor.
25 MR. PAUL: No objection.
26 THE COURT: Received.
27 MR. BARRON: May I display it then, please?
28 THE COURT: Yes.
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1 (Defendant Philip Morris' Exhibit CS-001076 was received
2 into evidence.)
3 Q (By MR. BARRON) And there you are in the middle, the
4 director of basic research?
5 A Yes, sir.
6 Q And as a director, in essence, was that a position -- we
7 heard Dr. Farone talk about being a director and directorate.
8 Was that a position equal to the one that Dr. Farone held
9 before he left in 1984?
10 A Yes, I believe it was.
11 Q And were there occasions when the Research and
12 Development Department was reorganized where sometimes you
13 would add or subtract a directorate or rename it in some way?
14 A Yes.
15 Q Did there come a time when you received any promotion
16 from the head of a directorate to something else?
17 A Yes. I believe --
18 Q When was that, please? You can kind of cheat a little
19 bit and look at the exhibit I have behind it, 1077.
20 A I believe it was 1993.
21 Q Okay. Would you look at that exhibit I have behind
22 there, which is 1077.
23 (Defendant Philip Morris' Exhibit CS-001077 was marked
24 for identification.)
25 A Yes.
26 Q And can you briefly tell us what that is.
27 A It's another organizational chart, and it lists me with
28 another title.
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1 Q And is it technology fellow it's called?
2 A Yes.
3 MR. BARRON: I would move this into evidence, your
4 Honor.
5 MR. PAUL: No objection.
6 THE COURT: Received.
7 (Defendant Philip Morris' Exhibit CS-001077 was received
8 into evidence.)
9 MR. BARRON: Okay. Let me display then Philip Morris
10 CS-001077 so the jurors may see this.

11 Q (By MR. BARRON) Can you briefly explain what additional
12 types of things you were now doing when you became a technology
13 fellow. In other words, what else was distinguishing between
14 that and your previous position as head of the directorate?

15 A The major difference -- differences between my previous
16 job and this job here that I held until I retired was my
17 interaction with outside companies, outside vendors, outside
18 universities and contractors. I was interested in technologies
19 from wherever they could come from that Philip Morris -- that
20 we would bring to Philip Morris to work on making a less
21 hazardous cigarette. So it's more of an outside job rather
22 than just an internal job, although, I did continue to work
23 with the people within R&D.

24 Q And did you have occasions to even work with government
25 organizations at either the state or federal level?

26 A Both, yes.

27 Q Could you just give an example.

28 A A couple of examples was with the Consumer Products
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1 Safety Commission, the Federal Trade Commission and with the
2 Commonwealth of Massachusetts.

3 Q Again, dealing with the issue of cigarettes and --

4 A Cigarette design, yes.

5 Q -- its involvement?

6 There has been testimony given in court by others that
7 were at Philip Morris in the Research and Development
8 Department. For example, a Dr. William Farone, F-A-R-O-N-E,
9 testified as a witness live.

10 Did you know him?

11 A Yes, I did.

12 Q Did you work with him?

13 A Yes, I did.

14 Q Another person who testified was Dr. Uydess,
15 U-Y-D-E-S-S.

16 Did you know Dr. Uydess?

17 A Yes, I did.

18 Q He actually testified by deposition. In the transcript
19 here, it starts on page 7589 in which he said that you were his
20 manager --

21 A I was, yes.

22 Q -- was that the case?

23 A Yes.

24 Q Another person who testified was a doctor -- I'm not sure
25 I'm pronouncing this right. Is it Mele, M-E-L-E?

26 A Mele. Yes.

27 Q And did you know him?

28 A I knew him, yes.

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1 Q We've also seen some documents written by someone named
2 Dr. Osdene, and we've had Dr. Farone make some comments about
3 Dr. Osdene.

4 Did you know Dr. Osdene?

5 A Yes, I did.

6 Q The plaintiff, the one who's brought this suit, is named
7 Mr. Larry Lucier.

8 Do you know him?

9 A No, sir, I don't.

10 Q Do you know his wife?

11 A No, sir, I don't.

12 Q Have you read any of their testimony, either given by
13 deposition or at trial?
14 A No.
15 Q Have you been asked to do that?
16 A No.
17 Q Well, I'm going to ask you now about some specific time
18 frames of importance concerning Mr. Lucier and his smoking
19 circumstances so we can ask you questions about what Philip
20 Morris was doing. And in order to do that, I'm going to --
21 since you haven't read any of that testimony -- ask you to
22 assume some things that I am getting from testimony.
23 Do you understand?
24 A Yes, sir. I think so.
25 Q All right. So, first of all, I want you to assume -- I'm
26 trying to be accurate and look -- I want you to assume that
27 Mr. Lucier has testified that after trying a cigarette in 1958
28 at age eight, he started in 1961 at age eleven to smoke
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1 cigarettes regularly.
2 Do you understand that assumption?
3 A Yes.
4 Q I want you to assume further that he's testified that at
5 age 16, in the summer of 1966 after smoking some brands of
6 cigarettes other than Marlboro, since 1961, he switched from
7 what was then his brand, Winston to Marlboro.
8 Do you understand that?
9 A I believe so, yes.
10 Q All right. Stop me if you don't. All right?
11 I want you to assume that he has testified that he
12 specifically started buying Marlboro on a regular basis in June
13 of 1966.
14 A Okay.
15 Q I want you to assume further that he testified that
16 before he switched from Winston to Marlboro in June of 1966, he
17 had basically become a pack-a-day smoker.
18 A Okay.
19 Q Now, I want you further and last to assume that he
20 testified that he remained a pack a day smoker and did not
21 change at all how he smoked while he was smoking Marlboros from
22 June of 1966 to approximately ten years later in 1976 when he
23 began smoking Merit. All right?
24 A Okay.
25 Q So, first of all, do you know of what efforts, if any,
26 Philip Morris made before June of 1966 to try to make
27 cigarettes safer for anyone who would come to smoke them?
28 A There was an effort at Philip Morris to reduce the tar
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1 and nicotine in the cigarettes through paper changes and
2 through filtration.
3 Q Now, since we heard that you didn't arrive until 1972,
4 how do you know what efforts were made before that time and in
5 that time frame I asked you before June of 1966? How do you
6 know?
7 A Uh, two ways. One is reading the reports and documents
8 that Philip Morris had available that I could read, and then
9 talking to people, people had who been around during that
10 period of time, getting an understanding of what kind of work
11 had gone on before.
12 Q Do you know anything about the characteristics of other

13 brands of cigarettes before June of 1966?
14 A In general terms, yes.
15 Q Do you have what you believe is a reasonably reliable
16 opinion as to whether when Mr. Lucier switched from Winston to
17 Marlboro, if he did, as he said he did, that he wound up
18 smoking in any way a less safe cigarette when he went to
19 Marlboro?
20 A No.
21 Q Do you have an opinion?
22 A I do have an opinion, yes.
23 Q What is your opinion?
24 A My opinion is, unfortunately, there's no difference.
25 Q Do you have a reasonably reliable opinion as to whether
26 there is a difference -- that some people notice who smoke --
27 in taste or flavor between Winston and Marlboro?
28 A Yes.

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1 Q What is your opinion?
2 A My opinion is that Marlboro tastes better than Winston.
3 Q Well, I was asking, first of all, whether people can tell
4 the difference.
5 A Yes.
6 Q You actually of have been yourself a smoker?
7 A Yes, sir.
8 Q And when you first were a smoker, were you smoking some
9 brands of cigarettes that included those other than Philip
10 Morris?
11 A Yes.
12 Q Did it include, for example, Winston?
13 A Yes.
14 Q And you told me -- did you eventually become a Marlboro
15 smoker?
16 A Yes.
17 Q By the way, when did you start smoking, in what year or
18 years?
19 A I don't recall the exact year. I graduated from high
20 school in 1961, so sometime around that period of time I
21 started college.
22 Q Sometime -- either '61 or '62?
23 A Something of that -- in that nature, yes.
24 Q So, coincidentally, you started smoking just about the
25 same time that Mr. Lucier says he did when he was 11 in 1961?
26 A Yes, sir.
27 Q When was it, by the way, that you switched to Merit from
28 Marlboro?

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1 A Uh, I recall switching from Merit to -- from Marlboro to
2 Merit when Merit came out. That would be about 1976, '77.
3 Q We'll get into that. Coincidentally, Mr. Lucier also
4 says he switched from Marlboro to Merit at about that time.
5 When you say that smokers can have preferences or tell
6 the difference, is there any way you can describe it for a
7 non-smoker how that could be? Because we have some jurors who
8 are not smokers.
9 A Right. I think like the difference maybe between Pepsi
10 and Coke or the difference between a couple of wines, a couple
11 of different wines. Two merlots, they never taste the same
12 from different vendors, or two chardonnays never taste the
13 same. So I think it's sort of that kind of difference. It's

14 not a huge knock-you-over difference, but there's a
15 difference. And I have preferences in the wines and in the
16 beers, and also in the cigarettes when I was a smoker.
17 Q Um, let me show --
18 A I hope that helps.
19 Q -- you next a demonstrative exhibit.
20 Well, actually before I do, let me ask you this. Have
21 you heard the phrase, U.S. sales weighted average for tar
22 yields for cigarettes?
23 A Yes.
24 Q We've had some description from multiple witnesses about
25 the fact that the average sales weight dropped in certain years
26 from the early '50s for a number of years somewhat downward.
27 Do you have any knowledge about that?
28 A Yes.

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1 Q Let me show you a demonstrative and -- actually, first
2 ask you by memory. Do you happen to know -- we talked about
3 June of 1966 when Mr. Lucier started smoking Marlboros. Let's
4 go back to 1961 when he said he first started to become a
5 regular smoker.
6 Do you have any understanding of how the sales weighted
7 average for tar dropped from, say, 1950 or the early '50s to
8 that period of the early '60s?
9 A In rough numbers, I recall that the tar in the early
10 '50s -- early to mid-50s was somewhere in the upper thirties,
11 and by the early '60s, it probably dropped to about the
12 mid-twenties.
13 Q Let me --
14 A Or maybe --
15 Q -- show you something that was shown to the jury that
16 graphically shows that.
17 MR. BARRON: It's a demonstrative that's already been
18 shown, your Honor, 506. Whoops. The other way. Let me take
19 this off.
20 MR. GROSSMAN: The zoom.
21 MR. BARRON: How do we zoom? Whoop. This way.
22 Q (By MR. BARRON) The top line in this is a bright red.
23 It doesn't show as a bright red there. And I think maybe
24 this -- there were two of these shown. This may have been
25 flipped. I think the top red really is the -- there it is.
26 Yeah. There's the tar yield.

27 Okay. Does that just -- although this is not your chart,
28 it was a chart of the codefendant, does this roughly show what

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1 you just talked about?
2 A Yeah. It shows that the tar in the mid-50s was mid to
3 upper thirties, and then by '61, I think you asked, it's down
4 to, oh, a bit over 25 there, I guess.
5 Q And then in June of '66, it would go down below 25?
6 A It appears as though, say, '66. It's around -- it's less
7 than 25, yeah.
8 Q Okay. Let me read to you, if I can, and ask you to
9 comment on some testimony that was given on that kind of drop,
10 that from the -- from the mid or high thirties down. It's
11 testimony that was given in the courtroom but through videotape
12 from a Sir Richard Doll, and ask you to comment on this.
13 MR. BARRON: It would be page 6651, line 18 of the trial
14 transcript, your Honor, to 6652, line 10.

15 May I put this on the Elmo?
16 THE COURT: Any objection?
17 MR. PAUL: No, your Honor.
18 THE COURT: All right.
19 Q (By MR. BARRON) This is the actual face sheet of the
20 trial transcript, December 13, 2002. We've been here a while.
21 And this is the first page. Let's put it up here and we'll
22 read along.
23 Between the 1950s -- starting line 18:
24 Between the 1950s and 1960s, and correct me if I'm
25 misstating this, tar yields in cigarettes decreased, were
26 lowered from an average of 35 milligrams to about 25
27 milligrams; is that correct?
28 Answer: No. That was over an earlier period.
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1 Question: Okay.
2 Answer: That was from the 1930s to the 1950s.
3 Okay. 1950s or into the '60s?
4 Answer: I really need to go back through the article.
5 Late 1950s, yes.
6 Question: Okay.
7 Answer: Post-war generation.
8 Question: And you continue to believe today that that
9 reduction had beneficial health effects?
10 Answer: I do.
11 Question: It reduced the risk of lung cancer?
12 Answer: Yes.
13 Question: So the cigarettes that were on the market in
14 the late 1960s were less risky than the cigarettes you smoked
15 when you smoked in the '30s and the '40s?
16 Answer: I believe that is so.
17 Do you agree or disagree with that?
18 A I agree with it.
19 Q Is that part of the reason why you mentioned earlier just
20 a -- a while ago that you thought that some efforts that had
21 been made to make a safer cigarette up to June of 1966 when
22 Mr. Lucier went to smoke Marlboro were in fact successful?
23 A Yes.
24 Q We talked about sales weighted average. Did in fact the
25 average for particular brands, specifically Marlboro, also drop
26 during that period?
27 A Yes, it did.
28 Q And did it continue to drop from 1961 to June of 1966?
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1 A Yes, I believe it did.
2 Q And as a matter of fact, I don't want to quiz you on this
3 precisely, but do you have a general view as to whether it also
4 happened to drop for the R.J. Reynolds product, Winston?
5 A I believe it did also, yes.
6 MR. BARRON: Let me take this down.
7 I got so busy, I should have introduced -- this is Miss
8 Deb Smith. She's helping me today, your Honor, and ladies and
9 gentlemen.
10 Thank you.
11 She'll want to be my boss before it's over, believe me.
12 Q (By MR. BARRON) All right. Let me talk then a little
13 bit in detail about -- with you, ask you questions about what
14 types of things were going on at Philip Morris, again, before
15 June of 1966, before Mr. Lucier first came to smoke the

16 Marlboro product, what was going on at Philip Morris in terms
17 of trying to make a safer cigarette and other things associated
18 with that, if I could. All right?
19 A Okay.
20 Q And I'm going to do it in that time frame, and then when
21 we finish that we'll go to if next time frame. All right?
22 A Okay.
23 Q Let me first of all, if I could, show you a plaintiffs'
24 exhibit. I'm almost certain it's already been admitted. It's
25 Exhibit Number 2. And I'm told it has.
26 MR. BARRON: And, Counsel, do you need a copy? I think
27 we have an extra one.
28 MR. PAUL: No, no.

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1 MR. BARRON: It's Mr. Wakeham's memo of 1961.
2 MR. PAUL: Oh, thanks.
3 Q (By MR. BARRON) You can have one. Let me show you this,
4 Exhibit 2. Why don't you turn to the first page and quickly
5 orient us. I can display it since it's in evidence. Let
6 me just quickly put it on the screen.
7 A I suppose you mean the second page.
8 Q Yeah. You got me. I did mean the second. I don't know
9 what this is. It's just a stamp, I guess, huh?
10 Okay. The second page. All right. So this is a Philip
11 Morris document, is it?
12 A Yes, sir, it is.
13 MR. GORDON: Judge, could we get a limiting instruction
14 as we did initially?
15 THE COURT: Any concern about that?
16 MR. BARRON: My concern? Oh, no. Are you asking me or
17 Mr. Paul?
18 THE COURT: Mr. Paul?
19 MR. PAUL: No, I'm not concerned. This is a Philip
20 Morris document.
21 THE COURT: All right. This is limited to Philip Morris.
22 MR. GORDON: Thank you.
23 Q (By MR. BARRON) Just very briefly in words the rest of
24 us can understand, what is this document dealing with?
25 A Well, if I ever use words that everybody can't
26 understand, please help me and I'll try to fix those.
27 Q All right.
28 A This is a general plan I think that Philip Morris or

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1 Dr. Wakeham was presenting at the time on how to make a safer
2 cigarette.
3 Q Now, would you turn to page nine, and I will put this --
4 and this is back in 1961 this was taking place, right?
5 A Yes. That's what the document says, yes.
6 Q Let me turn to page nine.
7 The jurors have seen this before. It was quite a while
8 ago. It's a list of, what, chemicals or compounds or what?
9 You tell me.
10 A The title is it's a list of compounds in cigarette smoke,
11 some of which are identified as carcinogens, it says.
12 Q Now, first of all, this list that Dr. Wakeham was trying
13 to get together of things to look at, is there anything on that
14 list that you know about that was known only to Dr. Wakeham or
15 only known to Philip Morris and not known to others so it was
16 somehow a secret?

17 A No, sir. I think all of these were known to the people
18 who were doing research and smoking and health, the public
19 health community.
20 Q Now, we've also had pointed out that there are some
21 things that we now think or even know are carcinogens, at least
22 in animals, that are also found in cigarette smoke --
23 A Yes.
24 Q -- but are not on that list.
25 A Yes.
26 Q Is that true?
27 A Yes.
28 Q And why would that be the case?

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1 A Uh, new learnings, new findings, new compounds are
2 identified -- or new compounds identified as carcinogens.
3 Q And, in fact, were some new technology needed to be
4 developed in order to identify some of those?
5 A Yes, sir. Some of the technology needed to identify some
6 of the carcinogens we know about now in cigarette smoke simply
7 didn't exist in '61.
8 Q Can you give us an example.
9 A I don't think --
10 Q An example of the technology.
11 A Oh, gas chromatography and mass spectrometry was refined
12 and developed over a period of time after that so that numbers
13 of compounds could be identified -- numbers of other compounds
14 could be identified.
15 Q Are there any compounds or chemicals on this list that
16 were being looked at that you now think in fact are not
17 carcinogens or not cancer causing?
18 A Well, there's two that sort of stand out. They're simple
19 sugars; fructose and glucose.
20 Q I'm sorry?
21 A They're simple sugars. Fructose and glucose on the
22 right-hand column, under ethyl alcohol. Or lactic acid,
23 that's in milk. Either one of those three. And there's others
24 on the list too, I'm sure.
25 Q Now, can you identify how it was that Philip Morris and
26 any other tobacco company, such as, R.J. Reynolds, was able to
27 lower those tar figures, was able to reduce in any way any of
28 the amounts of these compounds in those years that we talked

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1 about going up to June of 1966?
2 A There were two primary techniques that people in the
3 industry used to reduce these compounds, and it was to reduce
4 the tar and nicotine in the cigarettes, and that was done
5 through the use of filters and the use of porous paper that
6 wrapped the tobacco column.
7 The filters, just filtering out the tar and nicotine.
8 The porous paper, allowing air to go into the cigarette to
9 cause the cigarette to burn faster so it burns up before the
10 smoker smokes -- gets more of the smoke into their mouth.
11 Q Was there a time before June of 1966 that Philip Morris
12 actually established a formal research and development
13 department?
14 A Yes, there was.
15 Q And how early in time was that done?
16 A Sometime in the early '50s, I believe.
17 Q And can you describe what happened to that research

18 department in general in terms of its size or number of people
19 looking at the issue of trying to make a safer cigarette from
20 1952 up to June of 1966.

21 A It grew in size and grew in the numbers of disciplines of
22 scientists and technologists that came to work on making a
23 safer cigarette.

24 Q What I'd like to do is show you, I believe, Philip Morris
25 Exhibit Number 379.

26 (Defendant Philip Morris' Exhibit PM-000379 was marked
27 for identification.)

28 MR. BARRON: May I approach the witness, your Honor?
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1 THE COURT: Yes.

2 Q (By MR. BARRON) Would you open that up and, first of
3 all, indicate whether you can tell who the author of it is. If
4 you look on page 22, there's a signature.

5 A Yes, sir.

6 Q And on the first page, does it also talk about it being
7 something presented by the person who signed it in the back?

8 A Yes, sir.

9 Q And who is that person?

10 A It's Dr. Dupuis, who was the head of R&D at this time.

11 Q The head of R&D at Philip Morris?

12 A Yes.

13 Q So this is a Philip Morris document?

14 A Yes, it is.

15 Q And the date of it -- of the presentation on the first
16 page at the top is what?

17 A September the 30th, 1959.

18 MR. BARRON: And I would move this into evidence, your
19 Honor. It's Philip Morris Exhibit PM-000379.

20 MR. PAUL: I don't think I have an objection. I don't
21 have a copy.

22 MR. BARRON: Oh, I'm sorry. I thought --

23 MR. PAUL: I don't think there's an objection. Can I
24 just have a second?

25 THE COURT: Yes.

26 MR. PAUL: I have no objection.

27 THE COURT: Received.

28 (Defendant Philip Morris' Exhibit PM-000379 was received
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1 into evidence.)

2 MR. GORDON: Limiting instruction, please.

3 THE COURT: Limited to Philip Morris.

4 MR. GORDON: Thank you.

5 Q (By MR. BARRON) This is a 22-page document, and there is
6 insufficient time to take -- or we shouldn't take the time to
7 read all 22 pages, but let me just ask you a couple things.

8 I want to put this on the Elmo so you can track it,
9 Doctor, if you will. I'm going to put on page two and then
10 three.

11 The highlighted portion: Our research department was
12 established at an interesting and fortuitous time.

13 And then down -- and that was the early '50s following --
14 the jury's heard all about the 1950 -- for example, the Ernst
15 Wynder epidemiological report linking smoking with lung
16 cancer.

17 And then down below: Very little was known about the
18 chemical nature of tobacco smoke, about smoke filtration and

19 the various forms of ventilation, about the science and flavor
20 or the use of byproducts, or the science and art of new and
21 improved packages.

22 Is that your understanding of the case in the early '50s?

23 A Yes.

24 Q And then I want to show you a comment on page 14: The
25 health problem overrides all of our research work and is
26 probably both the most important and the most difficult problem
27 facing the industry.

28 Was that a true statement as of the time?

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1 A Yes.

2 Q And we've heard a lot about the difficulties involved
3 with lowering tar or trying to take out carcinogens. I'm not
4 going to have you go through all that again. We've had
5 Dr. Townsend who has testified a number of days.

6 You know Dr. Townsend?

7 A Yes, sir, I do.

8 Q And then just to finish off. As we mentioned, this is
9 actually a document that Dr. DuPuis signed, did he, on the last
10 page, on page 22?

11 A Yes, he did.

12 MR. BARRON: All right. We'll let Counsel read that, but
13 as a record, I would still move it into evidence to make sure
14 we get some resolution. I'm not trying to rush you.

15 MR. PAUL: No. I said I had no objection.

16 THE COURT: It's been received.

17 MR. BARRON: Oh, thank you, your Honor.

18 Q (By MR. BARRON) All righty. During this period before
19 June of 1966, we heard that R.J. Reynolds identified some
20 constituents in smoke for the first time.

21 Did Philip Morris likewise identify any for the first
22 time?

23 A Yes, I believe there was some identified.

24 Q And did Philip Morris also before June of 1966 do
25 anything to develop any new methods to analyze --

26 A Yes.

27 Q -- what was in smoke?

28 A Yes.

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1 Q Can you give the jury an example of something that Philip
2 Morris did, again, before June of 1966 in that regard.

3 A Again, it was gas chromatography methods.

4 Q Let me show you, if I might, Philip Morris 000423.

5 MR. BARRON: I've got one for you and one for counsel.

6 (Defendant Philip Morris' Exhibit PM-000423 was marked
7 for identification.)

8 Q (By MR. BARRON) Can you identify what this is, please.

9 A It's a memo. It's a Philip Morris memo, dated February
10 the 1st, 1965.

11 Q If you need to take a moment to look at it and answer
12 this question, please do so, but my question is: Is this
13 something that indicates any Philip Morris efforts to try to
14 reduce BAP or benzopyrene in response to any suggestion by
15 Dr. Wynder that that ought to be done, if you know?

16 A Yes.

17 MR. BARRON: Again, instead of reading the whole
18 document, I would just move that into evidence at this time,
19 your Honor.

20 MR. PAUL: No objection.
21 THE COURT: Received.
22 (Defendant Philip Morris' Exhibit PM-000423 was received
23 into evidence.)
24 MR. GORDON: Limiting instruction, please.
25 THE COURT: Limited to Philip Morris.
26 MR. GORDON: Thank you.
27 Q (By MR. BARRON) And this, again, was an effort and
28 response to a public health person that took place by Philip
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1 Morris that took place before June of 1966; is that correct?
2 A That's correct.
3 Q Now, we've heard about biological testing and biological
4 testing of cigarette smoke or condensate or things about
5 cigarettes that would give anybody any idea about whether it
6 was causing harm, and if so, how, and all those types of
7 things. All right?
8 A All right.
9 Q Did Philip Morris do anything in that regard in this time
10 frame?
11 A Yes.
12 Q Can you tell us the kinds of things it did in general and
13 where it was done.
14 A It did biological testing in a number of laboratories in
15 the U.S. One that comes to mind is the Hazelton Laboratory.
16 Another one I think is Battelle.
17 Q Now, is -- was Hazelton -- first of all, is Hazelton
18 still in existence, if you know?
19 A I think it is. I'm not positive.
20 Q At the time, what kind of reputation in science did
21 Hazelton have for that kind of testing that was done?
22 A It was very highly regarded.
23 Q Did anyone use that laboratory, that testing facility,
24 other than Philip Morris or other than other tobacco companies?
25 A Yes.
26 Q Can you give us an example of the kinds of industries
27 that would use it?
28 A Food companies. Manufacturers of consumer goods.
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1 Q What about Battelle? What was that like?
2 A It's also a very highly respected laboratory that did
3 biological testing under contract, and it still exists, I'm
4 sure of that. But Hazelton may.
5 Q All right. Let's turn to the next time frame, that
6 would be the time frame from June of 1966 to 1976. In essence,
7 for Mr. Lucier, the years that were the Marlboro years for him?
8 A Okay.
9 Q And then I'm going to ask you questions about Philip
10 Morris and its efforts during those years. All right?
11 A All right.
12 Q First of all, in those years, 1966 to 1976, did the
13 United States sales weighted average for tar continue to fall?
14 A It did, yes.
15 Q Did it continue to fall for the Philip Morris line of
16 products?
17 A Yes, it did.
18 Q Did it continue to fall for Marlboro specifically as a
19 cigarette?
20 A Yes, it did.

21 Q And therefore it always then not only remained but
22 continue to fall below that 25 milligram figure that Dr. Doll
23 mentioned in his testimony, correct?
24 A That's correct.
25 Q What kinds of design features for cigarettes -- we've
26 heard, for example, like filtration and other kinds of
27 things -- what kinds of things, if any, were beginning to get
28 developed during this time frame of '66 to '76, in general?

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1 And I want to get to the Merit cigarette specifically as a
2 separate topic later.

3 A Okay. The things we were doing at Philip Morris was to
4 develop better filters, for one, more efficient filters; to
5 develop better papers, more highly porous papers, which we've
6 already talked about.

7 In addition to that, we developed expanded tobacco,
8 tobacco that was puffed that we could use in a cigarette and
9 use less tobacco so there's less tobacco to burn to generate
10 tar and nicotine. And we were also developing technologies to
11 allow us to put holes in the filter to ventilate the filter, so
12 that when the smoker puffed on the cigarette, they got some air
13 along with the smoke so that it reduced the amount of tar and
14 nicotine that was going to the smoker.

15 So those two additional technologies were being developed
16 at Philip Morris during that period of time.

17 Q We've had some discussion, and I don't want to go into
18 great detail about the different ways you can make holes in the
19 filter for ventilation, but it changed over time eventually
20 from mechanical to a higher tech way of doing it; correct?

21 A That's correct.

22 Q Using lasers?

23 A That is correct.

24 Q Now, the Research and Development Department of Philip
25 Morris during these years, '66 to '76, did it change in any way
26 in terms of its size or location or locations?

27 A Uh, well, during that period of time Philip Morris built
28 what they called the research and center tower.

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1 Q What's that?

2 A It's a eight-story building with laboratories in it. We
3 also expanded into other buildings within the same general
4 area. We grew in size and we also grew in complexity with a
5 number of disciplines that -- again, that we brought to Philip
6 Morris to work on -- on making safer cigarettes.

7 Q Do you have any reasonable estimate to give as to the
8 number of people with degrees that were working on trying to
9 make a safer cigarette at Philip Morris during this ten-year
10 time period, '66 to '76. I don't want you just to guess, but
11 if you've got a estimate.

12 A I do have a good estimate.

13 Q Okay.

14 A In 1972, when I went to Philip Morris, there was
15 approximately -- by the end of that 1972 year, 1973, there was
16 approximately 300 people working at Philip Morris at that
17 time. In the beginning of that period you asked about, I think
18 there was like 120 or 130 people, something of that nature.

19 Q In the effort to try to come up with a safer cigarette,
20 to what extent, if at all, did Philip Morris pay attention to
21 what the public health community people or doctors were saying

22 or thinking or recommending?
23 A We paid a great deal of attention to that. We listened
24 to them. We went to meetings -- our people went to meetings
25 where they made presentations about what the findings were,
26 what the recommendations were, and we tried to put into
27 practice recommendations they were making.
28 Q Now, let me show you, if I could, an exhibit, Philip
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1 Morris 000682.
2 (Defendant Philip Morris' Exhibit PM-000682 was marked
3 for identification.)
4 Q (By MR. BARRON) And just take a look at it and just tell
5 us what it is, please.
6 A It's a memo from Dr. Wakeham to Mr. Goldsmith. It's a
7 Philip Morris document, dated September the 18th, 1967.
8 Q Would you take a moment to look at it, because I want to
9 ask you again whether this related in any way to any suggestion
10 that, again, the prominent Ernst Wynder had made.
11 A Yes, it does.
12 Q Explain what thought or recommendation he had in what
13 Philip Morris was doing in response to this.
14 A Uh, Dr. Wakeham is reporting that Dr. Wynder made a
15 recommendation to add nitrates to tobacco to reduce the
16 tumor -- tumorigenic effect of mouse skin painting, that is,
17 the condensate causing cancers on the back of mouse -- mice.
18 That was the recommendation that Dr. Wynder made.
19 This is a counter-proposal that Dr. Wakeham is talking
20 about in the fact that if they had added nitrate to the tobacco
21 or the cigarette, it would increase the amount of oxides of
22 nitrogen that would be delivered to the smoker, and he was
23 saying it was not the right thing to do because Dr. Wynder had
24 only taken into account the effect of mouse skin painting and
25 not all the other effects that might occur if somebody was
26 smoking this.
27 Q Now, I don't want this to be taken as a criticism of
28 Dr. Wynder. I just want to kind of break this apart a little
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1 bit, if I can.
2 A Sure, sure.
3 Q First of all, do you mean to be criticizing Dr. Wynder?
4 A No, sir, I do not.
5 Q Okay. So breaking this a part a little bit, is it true
6 that Dr. Wynder in good faith was reporting what you just said,
7 that he had gotten less reaction in mouse skin painting --
8 A Yes.
9 Q -- than if something were done adding nitrate?
10 A That's right.
11 Q But then Philip Morris was saying, Well, yeah, but if we
12 did that would anything else bad happen as a result?
13 A Correct.
14 Q And it found that there was this other problem created?
15 A That's right.
16 Q The jury has actually heard a lot about nitrates, about
17 nitrous oxides, about nitrosamines. In fact, is there still an
18 effort being made to try to reduce nitrosamines because of
19 what the public health people are saying?
20 A Yes.
21 Q And to reduce nitrous oxides?
22 A Yes.

23 Q Is this a unique situation in the circumstance of trying
24 to come up with a safer cigarette where if you try one thing
25 that at first blush might look like it was going to be safer
26 winds up to create another problem?

27 A This is not an uncommon problem. Sometimes you might
28 lower one thing but elevate another, and those are things that
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1 we don't want to do.

2 Q And as a matter of fact, we've heard about this. Has
3 there been a occasional change in point of view about what is
4 the most important target or targets to go after, whether it be
5 benzpyrene or nitrosamines or nitrates or whatever?

6 A I personally would like to get them all, but it has
7 changed in order of priority over time, yes.

8 MR. BARRON: Your Honor, I would ask that Philip Morris
9 Exhibit, we're just talking about, 682 be admitted into
10 evidence.

11 MR. PAUL: No objection.

12 THE COURT: Received.

13 (Defendant Philip Morris' Exhibit PM-000682 was received
14 into evidence.)

15 MR. GORDON: Limiting instruction, please.

16 THE COURT: Limited to Philip Morris.

17 MR. GORDON: Thank you.

18 Q (By MR. BARRON) Did Philip Morris during this time
19 frame work with any outside researchers in the effort to try to
20 make a safer cigarette?

21 A Yes.

22 Q And I'm going to show you here Philip Morris
23 Exhibit 1094. Actually, I'm told it's -- we call it
24 CS-001094.

25 (Defendant Philip Morris' Exhibit CS-001094 was marked
26 for identification.)

27 MR. PAUL: I have one.

28 MR. BARRON: You have one. Great. Thanks.

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1 Q (By MR. BARRON) And would you tell us what this document
2 is and what it shows related to that subject I just asked you
3 about, working with outside people.

4 A Yes. It's a memo from Dr. Osdene to Dr. Wakeham talking
5 about a visit with a Dr. Burger at the University of Virginia
6 in Charlottesville, Virginia.

7 Q And the date of this memo is?

8 A The date of the memo is December the 26th, 1968.

9 Q And was the outside researcher Dr. Burger?

10 A Yes. Yes, it was.

11 Q And is the subject the subject of trying to develop an
12 analog for nicotine?

13 A Yes.

14 Q And was it any secret as far as you could tell that
15 Philip Morris was interested in trying to develop an analog for
16 nicotine?

17 A No.

18 Q What did you understand Philip Morris' purpose was in
19 trying to find an analog for nicotine?

20 A Well, as it turns out, nicotine has two effects in the
21 body; one is in the central nervous system, and the other is
22 peripheral -- the peripheral nervous system. The central
23 nervous system is what makes people feel good when they smoke.

24 The peripheral nervous system elevates the blood pressure and
25 the heart rate.
26 And the desire was to find a compound similar to nicotine
27 called a nicotine analog that would give you the central
28 nervous system effect without raising your blood pressure and
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1 increasing the heart rate, the negative effects of nicotine.
2 Q We're going to get into that hopefully in a little more
3 detail later on, but let me just ask this. Is this an example
4 where Philip Morris' efforts and interests in that regard was
5 not secret from the public?
6 A No, it was not.
7 MR. BARRON: I'd like to move into evidence that exhibit
8 number, your Honor, Philip Morris CS-001094.
9 MR. PAUL: No objection.
10 THE COURT: Received.
11 (Defendant Philip Morris' Exhibit CS-001094 was received
12 into evidence.)
13 MR. GORDON: Same instruction, please.
14 THE COURT: Limited to Philip Morris.
15 MR. GORDON: Thank you.
16 Q (By MR. BARRON) Oh, by the way, I just noticed. Do you
17 know anything about a laboratory named Hoffman-LaRoche, the
18 pharmaceutical company.
19 A Hoffman-LaRoche Pharmaceutical Company does have
20 laboratories, yes.
21 Q Do you know anything about any effort that Philip Morris
22 had to partner with it to test another public health person's
23 view, Detrich Hoffman, about ascorbic acid being added to help
24 with the safety of cigarettes?
25 A I do remember that work going on, yes.
26 Q Let's talk a little bit about, if we can, in this
27 period -- this ten-year period, '66 to '76, of biological
28 testing. Did any biological testing go on during this period?
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1 A Yes.
2 Q Can you just give me a broad overview, and then I'm going
3 to ask you some specifics about some documents.
4 A Broad overview was biological testing was going on
5 with -- using animals, using techniques that didn't require
6 animals, such as, using petri dishes to evaluate various
7 biological systems. A whole array of biological testing was
8 going on.
9 Q Now, let me show you, if I can, Philip Morris Exhibit
10 001068.
11 (Defendant Philip Morris' Exhibit CS-001068 was marked
12 for identification.)
13 MR. BARRON: I have to say I'm sorry. CS-001068, a
14 Philip Morris document -- not Philip Morris document, Philip
15 Morris exhibit. Excuse me.
16 Q (By MR. BARRON) It's a thick one so --
17 A It is a thick one.
18 Q In this time frame, and specifically 1968, was there an
19 effort to develop at the University of Kentucky what is called
20 a reference cigarette?
21 A Yes.
22 Q Okay. What is that and why was it developed? Can you
23 explain it to us.
24 A I hope so.

25 Q All right.
26 A A reference cigarette was needed for the industry and for
27 the public health community to be able to have a cigarette or a
28 group of cigarettes that we all could use, that everybody could

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1 use to have the same test vehicle, if you will, to evaluate our
2 laboratory procedures against and ultimately to evaluate other
3 cigarettes against.

4 So a series of cigarettes were made in a very controlled,
5 very exacting conditions that people across the world as a
6 matter of fact could get to evaluate various tests and various
7 other cigarettes against those reference cigarettes.

8 Q Let me ask this and see if this helps, at all, us figure
9 out what this is. If I -- let's just take a Marlboro. If I
10 had a Marlboro at Philip Morris, and I was thinking that I had
11 something maybe that would make it safer --

12 A Mm-hmm.

13 Q -- something that would change it to make it safer --
14 pick something, just hypothetically.

15 A Make a paper change.

16 Q Okay. Make a paper change. You mean the outside paper?

17 A Yes. The paper that wraps the tobacco.

18 Q All right. So if I had a cigarette, a Marlboro here, and
19 I was thinking of trying to make a change to the paper in some
20 way that I thought, or my scientists thought, was going to make
21 it safer, can you explain how, first of all, a particular
22 reference cigarette would be picked from the University of
23 Kentucky's references, and then what would be done and how
24 would that help me in any way assess that. Can you explain
25 that?

26 A Can I use this back here maybe?

27 Q Sure.

28 A The board.

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1 Q Yes.

2 A Unfortunately, scientists are like kids and teachers. We
3 just sort of want to draw stuff.

4 So maybe -- as you said, maybe we've got a cigarette, and
5 what we want to do is to evaluate a change in the paper. So we
6 have another cigarette that has not been changed. So this is
7 the -- this is the -- well, this is actually the control, the
8 one that has not been changed.

9 Q You just lost me there.

10 A I know. I switched. I'm sorry.

11 Q I want to make sure I follow you.

12 A All right.

13 Q Because if we're going to do it, I don't want us to get
14 more confused.

15 A Right.

16 Q So the top one is going to be the Marlboro that --

17 A Unchanged.

18 Q Okay. So the old Marlboro?

19 A Right.

20 Q So it's the old paper?

21 A Right.

22 Q Okay. Now, the second one that you put "T" on is going
23 to be my --

24 A Test.

25 Q -- new Marlboro with the new paper?

26 A That's right.
27 Q All right.
28 A So the new paper.
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1 And I want to evaluate this, say, on mouse skin
2 painting. Pick one. I'll then pick a reference cigarette to
3 go along with this. The reason I pick a reference cigarette is
4 because mouse skin painting is a biological test and it tends
5 to change, not be consistent from day-to-day, but I need to be
6 able to come back to this sometime in the future, and also I
7 need to know that my mouse skin testing procedure was done
8 right, so make sure we get similar results to what we got
9 before. So I use the reference cigarette, which it's the
10 Kentucky reference cigarette that's talked about in this
11 document, that would be similar to the testing and control as
12 far as tar delivery goes.

13 Q Let me stop you right there. So is there at the
14 University of Kentucky more than one reference cigarette, in
15 other words, a variety that have a variety of other
16 combinations of tar or whatever? Is that it?

17 A Yes, sir. There's a range of tar delivery reference
18 cigarettes, so you'd pick one that would be similar to your
19 control.

20 Q So you pick one as close to the original Marlboro that
21 we're working with --

22 A That's right.

23 Q -- that we're going to think about changing?

24 A That's right.

25 Q And is there one, in fact, in Kentucky that is close to
26 Marlboro?

27 A Yes, there is.

28 Q Not exact, but close?

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1 A Close. That's right.

2 Q All right. So then what do you do once you pick this
3 one?

4 A So now I've got -- now I've got this control. Now I've
5 got it made, and I make it in a very exacting condition,
6 similar to the way of the Kentucky reference cigarettes. I
7 don't want to just go pick one off the line, because those do
8 tend to vary from time to time because of cropping and because
9 of the manufacturing variability.

10 I make the control and then I make the test --

11 Q Let me stop you right there. So one -- and make sure I
12 understand. So one reason for not going and getting a, quote,
13 as marketed or a, quote, commercial one just from a store shelf
14 is that it might vary from store shelf to store shelf.

15 A Yes. Yes, it might.

16 Q So you're going to get one that you know what you got
17 from right off your line, and that's the control one.

18 A That's the control, right.

19 Q It's going to be very close though, isn't it, to the
20 original?

21 A Yes, it is. Yes, it is. Very close.

22 Q How much would it vary from one off the shelf?

23 A Uh, it would -- it would vary by the fact that I know
24 exactly what's in it, from that particular blend of tobacco.

25 Q It would be close?

26 A Very close to the --

27 Q All right.
28 A -- what's the on the shelf.
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1 Q Now what?
2 A Now I take all -- all the tobacco, the filter and
3 everything else that's in this and now take off -- I don't use
4 the same paper that's in the control, but I use a new paper in
5 the test so that I can evaluate just this paper. I don't want
6 to have a whole group of changes folded together because I
7 can't really make heads or tails out of it.
8 I can't decide whether this new paper is good or bad if I
9 did all those other things along with it, so I make just that
10 one change to check out whether my new paper is going to be --
11 give me the results I hope for or not. And in this case, in
12 the mouse skin painting, I would be looking for a reduction in
13 the number of tumors on the back of a mouse, and hopefully that
14 would be something that I could evaluate.
15 The reference, again, will along because I know that for
16 the last umpteen years we know that if we use this reference
17 with those strings of mice it would give us a similar number of
18 cancers on the backs of mice, or tumors. So this will be a
19 check on the test.
20 Q Now, was it only Philip Morris that used this
21 standardized approach, the Kentucky reference approach?
22 A No. It was used by researchers around the world. It was
23 used by the public health community.
24 THE COURT: All right. We'll take the lunch recess.
25 1:30. Please do not discuss the case.
26 (Lunch recess.)
27 ---oOo---
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